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September 17, 2002

Michael Ribordy (SR-6J)
U.S. Environmental Protection Agency
Region V
77 West Jackson Blvd
Chicago, IL 60604

**RE: SAUGET AREA 2 SITES;
PROPOSED ADDENDUM 2 TO VOLUME 3 OF THE SSP;
SURFACE WATER, SEDIMENT AND AQUATIC BIOTA SAMPLING
PROJECT PLANS**

Dear Mr. Ribordy:

As directed by Mr. Steven Smith, Project Coordinator for the Sauget Area 2 Sites Group (SA2SG), please find attached two copies of the proposed Addendum 2 to Volume 3 of the Site Sampling Plan. The proposed addendum incorporates U.S. Environmental Protection Agency (USEPA) and Illinois Environmental Protection Agency (ILEPA) concerns that have been recently discussed in telephone calls with Mr. Smith. It is expected that this proposed addendum be placed on the agenda for discussion at the upcoming meeting on September 24, 2002.

If you have any questions on this, please contact me at (732) 302-9500.

Sincerely,

AMEC
Earth & Environmental

Charles R. Harman, P.W.S.
Principal Ecologist

cc: Peter Barrett, CH2M Hill (2 copies)
Sandra Bron, ILEPA (2 copies)
Jim Chapman, USEPA (1 copy)
Steve Smith; Project Coordinator (1 copy)
SA2SG Technical Committee (1 copy each)

VOLUME 3

SURFACE WATER, SEDIMENT AND AQUATIC BIOTA SAMPLING PROJECT PLANS

Addendum 2

In the Site Sampling Plan (SSP) and Aquatic Biota Sampling Project Plans approved by USEPA Region V, the Sauget Area 2 Sites Group (SA2SG) outlined a program to collect surface water and sediment samples from three areas within the Mississippi River that were believed to be receiving groundwater discharged from site-related locations on the river bank.

In June 2001, Solutia independently completed an aquatic ecological risk assessment for the Mississippi River downgradient of Sauget Area 2 Site R and areas east of Site R as part of the Krummrich investigation. That investigation consisted of the same type of investigative activities (*i.e.* surface water and sediment sampling, bioassays, fish tissue analysis) as originally designed for the Sauget Area 2 Sites project. Multimedia samples from the Krummrich investigation were collected from nine locations adjacent to Site R, as well as from upstream and downstream locations. The findings of the risk assessment can be found in the *Focused Feasibility Study, Interim Groundwater Remedy, Sauget Area 2 Sites O, Q, R and S* (December 2001) and the *Ecological Risk Assessment for WG Krummrich Plant, Sauget-St. Clair County, Illinois, Internal Review Draft* (Menzie-Cura, June 2001).

The findings of the Krummrich ecological risk assessment indicated that impacts to ecological receptors were occurring within the sampling area, though those impacts were generally seen within 300 feet of the shore. In general, then findings of the toxicity testing indicated that the majority of impacts were observed within 150 feet of the shore. The specific findings of the assessment were that planktonic species were determined to be at a potential risk from exposure to surface water at the sediment/surface water interface, and that benthic invertebrates were also at a potential risk from exposure to sediment based on toxicity tests. Fish species were identified as being at potential risk from exposure to sediment based on the results of toxicity testing. It was also shown that fish are accumulating a small number of compounds that were detected in study area sediment, but not detected in reference sediments. However, it was concluded that there was a low risk to wildlife foraging on the media within the

study area. Organic compounds (including volatile organics compounds, semi-volatile organic compounds and one herbicide) were elevated at surface water sampling locations that indicated toxicity. Organic compounds (including volatile organics compounds and herbicides) were elevated at sediment stations with identified toxicity.

Based on discussion with the USEPA and IEPA, the scope of the planned aquatic sampling program has been modified in order to 1) refocus the sampling protocols in order to utilize the findings of the Krummrich work downgradient of Site R, and 2) utilize the findings of the Krummrich work, in conjunction with the new data obtained from this program, to evaluate the potential for ecological impacts associated with potential groundwater discharge areas into the river. As such, the following changes are noted in the Surface Water, Sediment and Aquatic Sampling Project Plans (Volume 3). This Addendum will constitute the only documentation of these changes and upon approval by USEPA will be considered an incorporated part of the Volume 3 Sampling Project Plans. The changes are noted as follows:

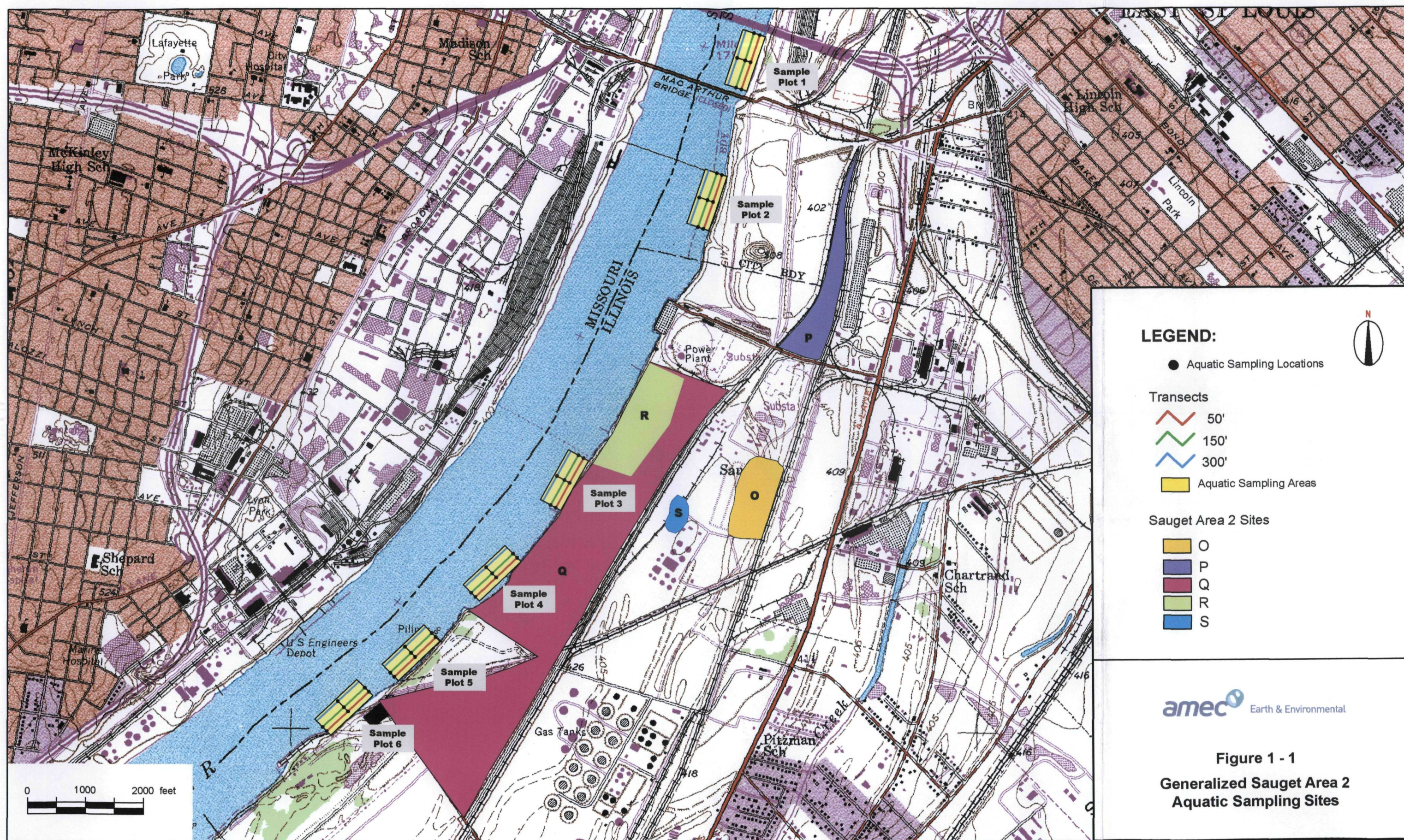
1. Sediment and surface water samples will be collected from six (6) sampling plots spaced along the extent of the river. One sampling plot will be located immediately upstream of Site P. One sampling plot will be located riverward of Site P. Three sampling plots will be located riverward of Site Q, with one plot riverward of the fly ash ponds, one plot riverward of the construction fill area, and one plot riverward of the fill area at the southern end of Site Q. One sampling plot will be placed immediately downstream of Site Q. Within each plot, three samples will be located along a transect placed 50 feet from the riverbank. Three samples will be located along a transect placed 150 feet from the river bank and one sample will be located along a transect 300 feet from the riverbank (see the attached Figure) for a total of seven (7) samples in each plot and a grand total of forty-two (42) samples;
2. Section 1.2 of the SW/Aquatic/Biota Field Sampling Plan (AFSP) is hereby modified to indicate the reconnaissance survey will not be conducted. Instead, an assessment of river/sediment habitat will be conducted just prior to the field collection of the surface water and sediment samples. The habitat assessment survey will consist of a qualitative evaluation of water quality and sediment substrate type. Water quality parameters using a Horiba or similar device will be collected in each of the sampling plots. Sediment will

- be collected using a grab sampler and brought into the boat for evaluation. Sediment will be qualitatively characterized as to grain size distribution, percent organic matter and presence of macroinvertebrates.
3. Section 1.3 of the (AFSP) is hereby modified to indicate that each of the 42 surface water samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, PCBs, and herbicides/pesticides. One sample from each sampling plot will be analyzed for dioxin. The dioxin sample will be collected at the center sampling point of the 150-foot transect of each sample plot. Sample collection techniques will remain as specified in Section 1.3.
 4. Section 1.4 of the AFSP is hereby modified to indicate that each of the 42 sediment samples will be VOCS, SVOCs, metals, PCBs, and herbicides/pesticides. One sample from each sampling plot will be analyzed for dioxin. The dioxin sample will be collected at the center sampling point of the 150-foot transect of each sample plot. Sample collection techniques will remain as specified in Section 1.4.
 5. Section 1.5 of the AFSP is hereby modified to indicate that samples will only be collected for benthic invertebrate community structure analysis if field observations of collected sediments during the habitat survey indicate that the substrate is substantially different from those sediments observed in the Krummrich work.
 6. Section 1.6 of the AFSP is hereby modified to indicate that sediment and surface water toxicity tests will only be conducted at each of the 42 sampling locations. Each of the toxicity tests and bioaccumulation tests will be conducted according to the protocols specified in Section 1.6.
 7. Section 1.7 of the AFSP will not be implemented and is hereby deleted from the program.
 8. Sediment and surface water samples will continue to be collected in accordance with the approved QAPP found in the Volume 3 Project Plans.

9. The data from the sampling will be evaluated in accordance with the protocols outlined in Section 12 of the SSP.

Approved

Date



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Figure 1 - 1
Generalized Sauget Area 2
Aquatic Sampling Sites